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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,296	03/13/2001	Vladimir Efimov	AM-00102.P.1-US	2109

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EXAMINER

MCKENZIE, THOMAS C

ART UNIT PAPER NUMBER

1624

DATE MAILED: 12/18/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,296

Applicant(s)

EFIMOV ET AL.

Examiner

Thomas McKenzie Ph.D.

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 97-129 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 97-129 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to an application filed on 3/31/01. There are thirty-three claims pending. Claims 97-117 are compound claims. Claims 118-129 are use claims. The application concerns some nucleobase compounds linked to a 4-hydroxyproline and uses thereof.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims parts of 97-99 and 102-105, drawn to pyrrolidine compounds of the structure given in claim 97 with B = hydrogen, classified in class 548, subclass 532.
- II. Claims parts of 97-107, drawn to purine compounds of the structure given in claim 97 with B = a purine, classified in class 544, subclass 264, among others.
- III. Claims parts of 97-107, drawn to pyrimidine compounds of the structure given in claim 97 with B = a pyrimidine, classified in class 544, subclass 298, among others.
- IV. Claims parts of 97-100 and 102-106, drawn to all other aromatic, heterocyclic, intercalator, or reporter compounds of the structure given in claim 97 with B = triazolopyridine or any ring other than a

purine or a pyrimidine, classified in class 546, subclass 117, among others.

- V. Claims parts of 108-113, drawn to phosphorus-containing purine and pyrimidine compounds of the structure given in claim 108 with $B^2 =$ a purine or a pyrimidine, classified in class 544, subclass 231.
- VI. Claims parts of 108-111, drawn to all other phosphorus containing aromatic, heterocyclic, intercalator, or reporter compounds of the structure given in claim 108 with $B =$ triazolopyridine or any ring other than a purine or a pyrimidine, classified in class 546, subclass 23, among others.
- VII. Claims 114 and 115, drawn to hybridized nucleic acid molecules, classified in class 536, subclass 23.1.
- VIII. Claims 116 and 117, drawn to solid support molecules, classified in class 525, subclass 281, among others.
- IX. Claims 118-121, drawn to a method of detecting a nucleic acid, classified in class 435, subclass 94.
- X. Claims 122-126, drawn to a method of purifying a nucleic acid, classified in class 536, subclass 23.1.

XI. Claims 127-129, drawn to a method of recombination, classified in class 435, subclass 440.

If applicants elect groups IV or VI, the aromatic, heterocyclic, intercalator, or reporter compounds other than purine or pyrimidine, then they must also elect a species of aromatic, heterocyclic, intercalator, or reporter compound for purposes of classification and examination.

3. The inventions are distinct, each from the other because of the following reasons: the heterocyclic core of the structure given in claim 97 is the ring B. This heterocyclic ring ranges in size from six to nine atoms, has multiple possible heteroatoms, and may be monocyclic or bicyclic. These multiple claimed rings are chemically non-equivalent and are not art-recognized as sharing the same biological properties. Inventions I-VIII have acquired a separate status in the art as shown by their different classification, thus the patent search required for Group I is not co-extensive with that required for Groups II-VIII. The basic names of these heterocycles differ, thus the literature search for these various species will be divergent. Because these inventions are distinct for the reasons given above, restriction for examination purposes as indicated is proper.

Should Applicants traverse the restriction requirement on the grounds that the different core rings are not patentably distinguishable, Applicants should

identify such evidence now of record or submit any such evidence that shows the groups to be obvious variants. Such evidence may be used in a rejection under 35 USC 103(a) if the Examiner finds any of the Groups unpatentable over the prior art.

4. Inventions I-VIII and IX-XI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case detecting and purifying a nucleic acid may be done spectroscopically or by gel electrophoresis respectively. Applicants admit that their products of claim 118 have at least three distinct uses. Thus, both prongs of the test are met.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be

accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

7. Please direct any inquiry concerning this communication or earlier communications from the Examiner to Thomas C McKenzie, Ph. D. whose telephone number is (703) 308-9806. The FAX number for before final amendments is (703) 872-9306. The Examiner is available from 8:30 to 5:30, Monday through Friday. If attempts to reach the Examiner by telephone are unsuccessful, you can reach the Examiner's supervisor, Mukund Shah at (703) 308-4716. Please direct general inquiries or any inquiry relating to the status of this application to the receptionist whose telephone number is (703) 308-1235.

Mukund Shah

**Mukund Shah
Supervisory Patent Examiner
Art Unit 1624**

TCMcK
December 11, 2002

